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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,540	12/11/2003	Markus Stimpfl	03-714	7735

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BACHMAN & LAPOINTE, P.C.
900 CHAPEL STREET
SUITE 1201
NEW HAVEN, CT 06510

EXAMINER	
RODRIGUEZ, RUTH C	

ART UNIT	PAPER NUMBER
3677	

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,540	STIMPFL ET AL.	
	Examiner	Art Unit	
	Ruth C. Rodriguez	3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5 and 8-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *9* is/are allowed.

6)☒ Claim(s) *2,4,5,8 and 10-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The finality of the rejection of the last Office action is withdrawn.

2. The indicated allowability of claims 4 and 5 is withdrawn in view of the detailed examination of the claims and the prior art of record. Rejections based on the cited reference(s) follow. The Examiner regrets any inconvenience experienced by the Applicant for the prior indication of allowable subject matter.

Drawings

3. The drawings are objected to because reference character "16" at the upper left hand side of Figure 2 should be replaced with reference character "6" since the leading lines is indicating one of the jaws and not the stop. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 4 and 5 are objected to because of the following informalities: Claim 4 and 5 recites the limitation "the steering sprindle journal" in line 30. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 8 and 11-13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cartwright (US 6,279,953 B1) in view of Japanese Patent Document JP 200-320562 (JP '562) and Kraus (US 5,651,634).

Cartwright discloses a connection between a steering mechanism (30) and a steering column (18) of a vehicle steering system. The connection comprises a steering coupling (62) that connects these two components (Figs. 1-3). The steering coupling has one end attached to one of the components (66) and another end having a coupling piece (66) movable in an articulated manner about an axle of articulation (between 64 and 66). The coupling piece forms a coupling partner with the other component and comprises two clamping jaws. The two clamping jaws engage around a section of the other component (84) after the coupling piece has been pivoted about the axis of articulation (Fig. 3). A clamping screw (88) is inserted into two openings formed in the clamping jaws (Fig. 3). The screw is screwed into a thread in such a manner that the section which is engaged around is secured by the clamping jaws (Figs. 1-3). The coupling piece has a stop (lower surface of the coupling piece where the section of the other component rests after the clamping jaws engage the section of the other component) that bears in the connecting position against the upper side of the section of the other component. Cartwright fails to disclose that the coupling piece further comprises at least one bolt and groove. However, JP '561 teaches a coupling piece comprising two jaws (11,12). The two clamping jaws engage around a section of a component (1) (Figs. 4 and 5). A clamping screw (not shown) is inserted into two openings formed in the clamping jaws (Fig. 1-5). The screw is screwed into a thread in

such a manner that the section which is engaged around is secured by the clamping jaws (Figs. 1-5). At least one bolt (23) is arranged on the coupling piece (Figs. 1-5). The bolt engages in a connecting position a groove (2) of the component (1). The groove has an end section that runs perpendicularly in the vertical direction with respect to the axial extent of the connecting partner bearing the groove in which the bolt has its end position (Figs. 1-5). The groove serves to keep the coupling piece and the component temporarily connected until the screw that passes through the clamping jaws is applied (Solution). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the bolt and groove taught by JP '561 in the connection of Cartwright. Doing, so serves to keep the coupling piece and the component temporarily connected until the screw that passes through the clamping jaws is applied. JP '561 fails to disclose that the groove is open in the vertical direction at the end remote from the end position and that it widens in a funnel-shaped manner following an section towards the end remote from the end position. However, Kraus demonstrates a groove open in the vertical direction at the end remote from the end position and that it widens in a funnel-shaped manner following an section towards the end remote from the end position (Figs. 7 and 8). The funnel-shape of the groove serves as a guide for the member (26) engaging the groove and helps to keep the member in place (Figs. 7-9). Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to provide the groove demonstrated by Kraus in the connection disclosed by Cartwright and modified by Jp '561 where the groove is open upward of the section of the other

component in order to be received within the clamping jaws of the coupling piece by engaging the bolt within the groove. Doing so, serves to guide the bolt of the coupling piece and also serves to secure the bolt.

Regarding claim 5, the same rejection of claim 4 serves to reject claim 5 where the coupling piece has a stop (upper surface of the coupling piece where the section of the other component rests after the clamping jaws engage the section of the other component) that bears in the connecting position against the upper side of the section of the other component (since the connection can perform the same function of connecting the two components irregardless of whether it engages the lower surface or the upper surface of the other component) and the groove is open downward of the section of the other component in order to be received within the clamping jaws of the coupling piece by engaging the bolt within the groove (when the clamping jaws receive the other component with the upper side of the other component against the stop).

Kraus also demonstrates that the groove is in the shape of a circular arc, the associated, imaginary circle being at least approximately concentric with the imaginary circle of pivoting movement of the coupling piece (Figs. 7 and 8).

At least one of the connecting partners disclosed by Cartwright has two parallel grooves arranged on opposites sides of the connecting partner (Figs. 2 and 3).

JP '562 also teaches that the connecting partner that is engaged around has on its lower side a transverse channel (5) having a semicircular cross section.

The section of the connecting partner disclosed by JP '562 that is engaged around has a screw passage hole (5) running transversely.

JP '562 also teaches that the coupling piece has a U-shape in cross section (Figs. 1-5). The limbs of the U-shape form the clamping jaws (11,12) and the base of the U-shape bear against the facing circumferential region of the section of the connecting partner that is engaged around (Fig. 5). The sides of the section of the connecting partner that is engaged around and that lie opposite the clamping jaws are flattened (Figs. 3-5).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cartwright in view of JP '562 and Kraus as applied to claim 1 above, and further in view of Debbischop (US 6,135,667).

The combination of Cartwright, JP '562 and Kraus yields a connection having all the features mentioned above for the rejection of claim 1. Cartwright, JP '562 and Kraus fail to disclose that the thread is formed in a weld-on nut that is fastened to the outside of one clamping jaw of the clamping piece. However, Debisschop teaches a connection device between two components (10,30) where one of the components is a clamping piece (30) having two clamping jaws. The clamping jaws are compressed by the use of a bolt (40). A weld-on nut is fastened to the outside of one clamping jaw of the clamping piece in order to provide a thread that will be engaged by the bolt. Providing the weld-on nut in the clamping jaw simplifies the connection of the two components because the weld-on nut prevents rotation of the nut during tightening of the clamping piece (C. 2, L. 57-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention to provide a weld-on nut fastened to the outside of one clamping jaw of the clamping piece in order to provide

the thread as taught by Debisschop in the connection disclosed by Cartwright and modified by JP '562 and Kraus. Doing so, simplifies the connection of the two components because the weld-on nut prevents rotation of the nut during tightening of the clamping piece.

Allowable Subject Matter

8. Claims 9 is allowed.

Response to Arguments

9. Applicant's arguments filed 24 March 2006 have been fully considered but they are not persuasive.

10. The Applicant fails to provide any arguments why claims 4 and 5 are allowable over the prior art of record and relies only in the Examiner's indication of allowability. Upon detailed study of the claimd, the Examiner realized that these claims do not specify any structure for the stop and that any interior surface of the coupling piece that receives the section of the other component where the clamping jaws engage with the section can be considered the stop. Additionally, the disclosure of the application failed to provide any criticality for having the stop.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McClanahan et al. (US 5,628,578), Oka et al. (US 6,565,446 B2) Crudele (US 6,739,790 B1) are cited to show state of the art with respect to connections between a steering mechanism and a steering column having some of the features being claimed by the current application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth C Rodriguez whose telephone number is (571) 272-7070. The examiner can normally be reached on M-F 07:15 - 15:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on (571) 272-7075.

Submissions of your responses by facsimile transmission are encouraged. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-6640.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ruth C. Rodriguez
Patent Examiner
Art Unit 3677

rcr
April 7, 2006

ROBERT J. SANDY
PRIMARY EXAMINER